Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	)	
	)	
Digital Audio Broadcasting Systems	)	MM Docket No. 99-325
And Their Impact on the Terrestrial	)	
Radio Broadcast Service	)	

To: The Commission

Reply Comments of Reunion Broadcasting L.L.C.

The following reply comments are filed on behalf of Reunion Broadcasting L.L.C. ("Reunion") in response to the Commission's Further Notice of Proposed Rulemaking and Notice of Inquiry in the above captioned matter and the Commission's Public Notice released on April 14, 2004 styled "Comments Sought on the Use of Digital AM Transmissions During Nighttime Hours."

In its initial comments, Reunion encouraged the Commission to authorize nighttime analog/digital hybrid operation on the AM band upon a showing by the party seeking to commence such operation that the energy introduced into the adjacent channels, when subjected to traditional methods of RSS analysis, would meet the current protection requirements. Reunion believes this approach is essential to promoting the orderly development of digital nighttime operation while providing protection to existing analog service. Further, the proposed approval process provides a degree of regulatory certainty which should speed the ultimate adoption of digital operation.

Nighttime AM IBOC Operation

Reunion continues to support the rapid introduction of spectrum efficient digital broadcasting on the AM band. However, the introduction of hybrid analog/digital systems on this band during the nighttime should be permitted only pursuant to a showing that the hybrid facilities will not create additional interference to existing stations.

Comments filed by engineer Charles Hutton[1] contain a detailed analysis of the energy presented by the multiple adjacent channel subcarriers utilized by the Ibiquity system. The IBOC interference calculations which are attached as Appendix A to the comments indicate that a 50 kW station operating in the Ibiquity hybrid mode would produce a *minimum* of 1499 watts in each the upper and lower first adjacent channel.[2] This power is significantly more than that calculated by Reunion in its initial RSS studies to determine compatibility of the Ibiquity hybrid mode with the present AM protection requirements.[3] The results of Hutton's ODFM subcarrier analysis confirms that the Ibiquity hybrid system should not be approved for nighttime operation absent a showing by the station proposing the operation demonstrating that existing protection requirements will be satisfied.[4]

The NAB Proposal Goes Too Far

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[1] See, Comments of Charles Hutton, filed June 14, 2004.

[2] Power stated is that seen by a receiver with a 5 kHz bandwidth. Interference increases substantially as the receiver bandwidth increases.

[3] Reunion's initial review was based upon the power introduced by a single adjacent channel subcarrier. The power so calculated was then subject to standard RSS analysis to determine whether selected test stations operating in the hybrid mode would fit the Commission's present protection requirements. That test process revealed that some stations would meet the existing protection requirements; others would meet the current requirements with a 3 to 6 dB power reduction and others required a significant reduction in adjacent channel energy to fit the existing protection requirements. Hutton's ODFM analysis indicates that the power presented in the first adjacent channel is more than ten times greater than the single channel energy initially calculated by Reunion.

[4] Indeed, this analysis of the ODFM subcarriers would indicate that it is highly likely that the Ibiquity hybrid system violates the Commission's adjacent channel *daytime* protection requirements.

The NAB has proposed that stations authorized for nighttime operation be allowed to commence hybrid digital operations using the Ibiquity system on a blanket basis, with instances of interference being addressed by the Commission on a case-by-case basis. Reunion joins with WGN Radio in stating that the NAB proposal goes too far.[5] Even the proponents of the Ibiquity digital system acknowledge that increased interference will result from use of the Ibiquity system. While their comments are couched in terms used to describe subjective levels of interference[6] any increase in nighttime interference will violate existing Commission rules and is not justified by the few digital receivers in the marketplace.

Reunion joins with the other commenters who suggest that conversion to digital operation should be dictated by the market place. As has been clearly demonstrated in these proceedings, the conversion to Ibiquity hybrid digital operation involves certain tradeoffs. A station operating in the Ibiquity hybrid mode is unable to offer full fidelity since hybrid analog bandwidth is cut in half (i.e., restricted to 5 kHz). Further, the Ibiquity system does not permit stereo operation on the analog signal. As a result those broadcasters wishing to engage in hybrid operation must carefully weigh the costs and benefits of the operation. Until receivers are in the market place, there is little incentive for a broadcaster to compromise its analog operation. Even then, some AM stations desiring to convert to hybrid operation may find themselves prohibited from doing so due to bandwidth limitations in their antenna systems.

Analog operation on the AM band will continue for years. Some broadcasters may determine that the benefits to be gained by utilizing the Ibiquity hybrid system do not justify the

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[5] See the comments WGN Continental Broadcasting Company, filed June 7, 2004.

[6] Instead of dealing with the level of interference by reference to existing night limits, numerous proponents of unlimited nighttime hybrid operation choose to use subjective terms, such as areas of "core listenership"; "edge of coverage", etc. The Ibiquity studies do indicate that interference can be expected at the edge of a station's NIF contour. They fail to mention that the NIF contour does not represent the limits of a station's usable nighttime

cost. Others may wish to utilize the system, but be unable to do so for technical reasons. In any event, analog operations should be afforded the same interference protection that the Commission rules now mandate. Nighttime interference protection is not, as some commenters have suggested, "an anachronism" or a "quaint notion." It is the law.

Digital Permitting Recommendations

Reunion stands by its original recommendation that stations proposing to operate with the Ibiquity hybrid mode should be required to prove to the Commission that no interference will result from their operation.[7]

Broadcasters large and small require some degree of regulatory certainty before undertaking a technological change that will require a significant capital investment. The NAB proposal to handle interference issues on a case by case basis, after the fact, doesn't provide that certainty. New nighttime analog facilities require application, notice and technical review by the Commission before a construction permit is issued. Because of the significant energy introduced into the adjacent channels by the Ibiquity hybrid system, the same permitting requirements should be extended to hybrid digital proposals.

Respectfully submitted,
Reunion Broadcasting L.L.C.

/s/

D. Stanley Tacker
Manager

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signal and that in recognition of that fact, Commission rules only require a station's NIF contour to encompass 80% of its city of license.

[7] Reunion has suggested that the power in each adjacent channel be determined and that an RSS analysis be performed on each adjacent channel to determine if the new adjacent channel energy will fit the Commission's allocation scheme. If it is determined that the adjacent channel energy produced by the hybrid operation will enter the night limit of a station operating on the adjacent channel, the station proposing digital operation should be required to reduce power until the signal fits within the existing protection requirements.